UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,380	01/17/2006	Norbert Kroth	1454.1613	4983

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EXAMINER
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ART UNIT	PAPER NUMBER
2617	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

		Application No.	Applicant(s)	
Office Action Summary		10/534,380	KROTH ET AL.	
		Examiner	Art Unit	
		MICHAEL T. VU	2617	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>20 March 2009</u>.

2a)☐ This action is **FINAL.** 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>17-36</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>17-20,26-29 and 33-36</u> is/are rejected.

7)☒ Claim(s) <u>21-25, 30-32</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments, see Remark, filed 10/22/2006, with respect to the

rejection(s) of claim(s) 17-36 under 103(a) have been fully considered and are

persuasive. Therefore, the rejection has been withdrawn. However, upon further

consideration, a new ground(s) of rejection is made in view of Agarwal (US 6,690,661)

in view of Suzuki (US 6,493,540), and further in view of Choi (US 7,233,577).

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

   Regarding claims 26-28, the phrase "for example: The method according to

claim 17, wherein a base station associated with a communication network issues a

request, after the delay time, the user equipment performs an uplink access

transmission as a response to the request, the network determines **if** the number of

user equipments responding to the request exceeds a predetermined threshold, and the

network signals to the user equipments to terminate further uplink access transmissions

if the threshold is exceeded".

The phrase renders the claim indefinite because it is unclear whether the

limitation(s) following the phrase are part of the claimed invention. See MPEP

§ 2173.05(d).

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   **Claims 17-20, 29 and 36 are rejected under 35 U.S.C. 103(a) as being**

unpatentable over Agarwal (US 6,690,661) in view of Suzuki (US 6,493,540).

       Regarding claims 17 and 36, Agarwal teaches a method for controlling uplink

access transmissions in a radio communication system (reverse sub-channels=uplink

paging response message used by mobile phones, Col. 1, lines 25-34), comprising:

determining a random delay time (determined random delay time/period, Col. Lines 24-

43) for user equipment to transmit a signal on an uplink access channel based upon a

probability distribution that increases in density with increasing delay (controlling

random access channel congestion/overload from a large number of mobile devices

paged, Col. 2, lines 12-39), and (mobile phones attempt to transmit broadcast short

message using the random access channels for preventing delay, Col. 2, lines 36-39),

But Agarwal does not explicitly teach the random delay time being determined by the user equipment.

However, Suzuki the random delay time being determined by the user equipment (determined from/by mobile station, Col. 9, lines 8-10), and (radio random access controlled the transmission start timings of the mobile stations, Col. 3, lines 47-59).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Agarwal, with Suzuki's teaching, in order to improve the random delay by encountered the transmission start timing in the mobile stations such as in the case of the plurality of mobile stations simultaneously transmit at the same timing of the same frequency that caused delayed.

Regarding claim 18, Agarwal and Suzuki teach the method according to claim 17, wherein the delay time is determined upon receipt of a request for uplink access transmissions from a base station (determined and/or controlled by base station, Col. 5, lines 1-31) of Agarwal.

Regarding claim 19, Agarwal and Suzuki teach the method according to claim 18, wherein the base station transmits the request on a paging channel **or** on a control channel (paging controlled by base station, Col. 5, lines 1-31) of Agarwal.

Regarding claim 20, Agarwal and Suzuki teach the method according to claim 17, wherein the signal for which the delay time is determined is a response signal transmitted by the user equipment on a contention based common uplink access channel (Col. 9, lines 1-15) of Suzuki.

Regarding claim 29, Agarwal teaches the method according to claim 19, wherein the signal for which the delay time is determined is a response signal transmitted by the user equipment on a contention based common uplink access channel (determined from/by mobile station, Col. 9, lines 8-10), and (radio random access controlled the transmission start timings of the mobile stations, Col. 3, lines 47-59) all of Suzuki.

5.   <u>Claims 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agarwal (US 6,690,661) in view of Choi (US 7,233,577).</u>

Regarding claims 33 and 35, Agarwal teaches a method for controlling uplink access transmissions in a radio communication system (reverse sub-channels=uplink paging response message used by mobile phones, Col. 1, lines 25-34), comprising: using downlink signalling from a base station of the radio communication system to transmit time variable information to user equipments located in an area covered by the base station (transmit from base station to mobile phones, Col. 5, lines 1-12),

But Agarwal does not explicitly teach using the time variable information to determine delay times for transmitting signals on an uplink access channel from the user equipments, the time variable information varying based upon a probability distribution which increases in density with increasing time.

However, Choi teaches using the time variable information to determine delay times for transmitting signals on an uplink access channel from the user equipments

(determined delay time, Col. 6, line 60 to Col. 7, line 2), the time variable information

varying based upon a probability distribution which increases in density with increasing

time (increase time (Col. 37, lines 31-54).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify Agarwal, with Choi's teaching, in order to provide

using the radio access channel for suppressing a collision between the user equipments

for controlling the uplink common channel with a higher reliability within a set time for

preventing delayed.

Regarding claim 34, Agarwal teaches the method according to claim 33,

wherein the user equipments each perform a comparison of a randomly determined

number with the time variable information (time set, Col. 1, line 55 to Col.2, line 4), and

based on the result of the comparison (compared Col. 2, lines 42-65), each user

equipment controls the transmission of said signals on the uplink access channel

(controlled access channel, Col. 1, line 55 to Col.2, line 4) all of Choi.

Allowable Subject Matter

6.   Claims 21-25, and 30-32, are objected to as being dependent upon a rejected

base claim, but would be allowable if rewritten **claims 21-25, 30-32** in independent form

including all of the limitations of the base claim and any intervening claims.

        With respect to claims 21 and 30, the prior art of record fails to teach alone

or in combination the method according to claim 17, wherein the probability

distribution is determined according to: $p(t)=x.e^{Xt}/(e^{XT}-1)$ for $t~[O,T]$ wherein $p(t)$

denotes a probability that a delay time t is selected, T denotes a predetermined

maximum delay time, and x is a parameter that controls a rate of change of probability

with time.

        For claims 22 and 31, the method according to 17, wherein the probability

distribution is determined according to: $p(j)=q^{n-J} o(1-q)/(1-q^n)$ for $I e [0,n]$ wherein n is

the number of sub-intervals in a predetermined time interval T, $P(j)$ denotes a probability

that sub-interval j is selected, and q is a parameter that controls a rate of change of

probability within a sub-interval.

        For claims 23 and 32, the method according to claim 17, wherein the probability

distribution is determined according to: $P(j)=(q^{n-j} -q^n)/(1-q^n)$ for $j e[1,n]$ wherein n is the

number of sub-intervals in a predetermined time interval T; $P(j)$ denotes a probability

that sub-interval j is selected, and **q** is a parameter that controls a rate of change of

probability within a sub-interval.

For claim 24, the method according to claim 21, wherein T and x are signaled to

the user equipment.

For claim 25, the method according to claim 24, wherein T and x are transmitted

together with a request for the delay time from the base station.

(Please see the original equations in the claims 21-25, and 30-32)

Conclusion

7.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to MICHAEL T. VU whose telephone number is (571)272-

8131. The examiner can normally be reached on 8:00am - 6:00pm.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Charles N. Appiah can be reached on 571-272-7904. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MICHAEL T VU/
Examiner, Art Unit 2617